

Judith Kelley: Hello and welcome to Policy 360. I'm Judith Kelley, Dean of the Sanford School of Public Policy. In 2013, Chinese president Xi Jinping announced the one belt one road or BRI Initiative. It's a massive infrastructure project aimed at linking countries along the old Silk Road routes with Europe. They've spent close to a 150 billion a year in the 68 countries that are taking part, and there are a lot of motivations behind the BRI. The Chinese project planners hope to create an economic trade environment to rival the US dominated transatlantic trade, but they also hope to create new markets for Chinese companies, and to better utilize sea trade to bolster their claims over the south China Sea. Aside from all the politics, such a large undertaking has immense implications for the environment that we don't hear nearly as much about. Alexander Pfaff is here to discuss this with us. He is a professor of public policy, economics and environment here at the Sanford School. He specializes in the intersection of economic and environmental policy.

Judith Kelley: Alex has just coauthored an interesting piece for the Brookings Future Development blog about the environmental risks of the BRI, and alternatives that would avoid environmental damage while still allowing for improved infrastructure. Welcome to Policy 360.

Alexander Pfaff: Thank you, good to be here.

Judith Kelley: What does the name belt and road mean?

Alexander Pfaff: Oh my, I guess it means a lot of things to a lot of people. In short, it's giant investments to connect China with the rest of the world both physically with roads and ships, and also I would say financially and politically as you say.

Judith Kelley: Why is it called belt and road? What's the belt part and the road part?

Alexander Pfaff: Well I don't know that people separate those per se. You do think of over land routes and marine routes are separated. You do think of the old Silk Road as part of the road story. I think a general point is almost any two people tend to think of the BRI as something different. Most broadly from some while ago to some time in the future, it's really large investments both physical and financial that will shape economic trade as you say, and inevitably will affect the environment, and that is what we wanted to comment on.

Judith Kelley: What countries are we talking about?

Alexander Pfaff: Could be almost anywhere. I think a lot of the focus is in Asia. A lot of the overland routes are through Asia. There's an article in the Times the other day on setting up a hub in connecting various Stan countries. Some people for sure in the environmental field are quite worried for instance about the influence of Chinese investments on infrastructure in Latin America.

Judith Kelley: You say infrastructure, what kind of infrastructure are they building?

Alexander Pfaff: The literal translation tends to be the roads, but not more toward transport, roads and rails, and even that's a big difference, the choice between a road and a rail is a choice we can imagine trying to influence for environmental reasons. There's also shipping routes, and in terms of other infrastructure, for sure there's power, like there's investments in dams. Brazil for instance has a huge fraction of its energy from hydropower, which is fantastic for carbon emissions, and less fantastic for some other outcomes.

Judith Kelley: It's mostly investments in infrastructure more so than scientists' foreign direct investments of other kinds?

Alexander Pfaff: That's right. There are even there are students here studying investments in say coal power plants around the world. I don't think except for in the broadest sense people tend to refer to that within belt and road. Really as an environmental and development person, I think we should be thinking about all of those investments.

Judith Kelley: There's six corridors that make up the project. Can you describe those?

Alexander Pfaff: I'm certainly not the expert on going through each of the corridors, and that's why we do it as a team. The case that we brought up most when we were putting input into a World Bank report where the bank had say the general equilibrium modeling of trade, and there just to get to one of the future stories, it's pretty important that some of the investments look like they have big gains, and some not so much. When there are gains, some people would gain a lot, and some places not so much. It's that variation in economic investments that I think opens the opportunity to look for things that are more economically useful and less environmentally damaging. The case that we use to come to your question was the ... I think CICPEC corridor going down including through Vietnam where there's specific possible routes that have been considered, and you can imagine some being best for transport costs, some benefiting certain cities, and benefiting others, and some going through as my college's colleagues would say particular habitat that is extremely rare, others affecting water quality more upstream of cities.

Alexander Pfaff: In that CICPEC corridor, you're thinking of up to seven different routes that will vary in terms of the economic gains, who gets those gains, and the types of environmental damages.

Judith Kelley: What did you find in your project?

Alexander Pfaff: We didn't do an analysis. We weren't asked to do an analysis yet. What we were trying to do is say, "Please do analysis." My personal belief is that to first order, environmental policy is failing to be integrated with development investments, and I think that can hurt both. If I speak to the person who is the sustainable infrastructure leader at the Inter-American Development Bank, I think the way he would be asked to think about it in his job is achieve development, but worry

about the risks of damaging the environment and being slowed down by lawsuits. If I think of how my colleagues at the [inaudible 00:06:00] School of the Environment might think of it, it might be maximize environmental gains or minimize environmental damage while allowing for close to the same economic gain that people had in mind.

Judith Kelley: Right, which constraint are you focusing on?

Alexander Pfaff: Exactly.

Judith Kelley: Got it.

Alexander Pfaff: Exactly. We wanted to just say it really doesn't look like when these projects are planned that anyone is asking both questions, making it impossible to achieve the best trade offs. Really we wanted to say, "No one appears to be asking how do we balance these and do the rest for both. Here's a bunch of literature documenting that there's almost surely going to be serious environmental damages, and just a little example say a toy example for that CICPEC corridor of the kinds of choices you could make to do better either way, better economics for a given environmental outcome, or better environment for a given economic outcome."

Judith Kelley: When you say nobody's asking both questions, is it really the case that nobody in reality asking the environmental question, or is it that in some cases, they're asking the environmental questions, and in other cases they're asking the development impact prosperity question?

Alexander Pfaff: Right so that's right, different people asking the two questions. Often the people making the investments focus on the economic question, which is a great and important question, and other people raising environmental concerns, but not in the same process. Then you'll sometimes hear, "Oh but look, there's environmental impact assessments." They tend to come way, way down the line when all the big decisions have been made. Then there's strategic environmental assessments, a little bit better, but really the decision's about which route could be even considered, would have to come quite early. I think it's quite fair to say and this is our main point, rarely are people looking for both outcomes really early on, when you could have the really easy adjustments, not the painful late ones.

Judith Kelley: Right, so it's not just that the initiative is being always erring on the side of gains, prosperity and ease of construction, it's just that it's just not even potentially taking more optimal routes that could potentially get them the same outcomes, but be less environmentally harmful? They're just not being considerate in that way are you saying?

Alexander Pfaff: Yeah and maybe 'considerate' sounds like they wouldn't care, sometimes I would say not informed. One of the reasons to not be informed is you're

focused on one goal, you plan for that goal, you don't even ask the question, "Could I pretty much get the same goal and hurt the environment a lot less?" Then as this colleague at the IDB points out, maybe I'm not even doing the best for my economic goal if I'm failing to realize that sort of ever growing global governance processes might slow me down. In the most narrow way to pitch what we want to say, it's "Why don't you get rid of your environmental risks while you do the best you can for the economy", and then you can phrase it lots of different ways.

Judith Kelley: In terms of environmental risks, what is it you were really seeing in the case you looked at? Is it deforestation? Is it water management? What are the biggest things that you're concerned about?

Alexander Pfaff: Pretty much anything you can think of. If we go just within species alone, there are particular places where the species only exist in one place. We're certainly concerned about deforestation in terms also of carbon storage and global climate change potential. Water quality is a big deal. I guess one thing we also are trying to push is don't only think of the immediate damage, build road, spill oil on the ground, and that's a thing we should think about. We also need to realize build road, many people move to the city, other people move to places they never lived before. Think about the five year, 10 year reorganizations of whole economies and landscapes, those are probably way bigger impacts than those immediate damages, even though those could be consequential.

Judith Kelley: Now are we seeing this because just a lack of expertise, because the companies that these infrastructure projects are occurring in don't have a long history of considering environmental impacts because they are less developed, and it's not in the forefront of their agenda? It is just a lack of expertise, and if so, can the US get involved, or are the tensions between China and the US too high to bring expertise to bear on it?

Alexander Pfaff: Yeah I mean I think it would be very hard to say there's a lack of expertise on almost anything in China. I think there are plenty of countries where there is as you say a lack of tradition of prioritizing the environmental outcomes. There is certainly then a tradition of not worrying about the five year down the line reorganization of the landscape. I think one way to take your questions is I actually think China as far as I understand, I'm not an expert on China, has really changed the way the environment is prioritized within China.

Judith Kelley: Out of necessity.

Alexander Pfaff: Out of necessity that's right. That doesn't imply that the same adjustment in prioritization will occur as China invests around the world. In fact, you'll tend to see a very reasonable statement why should China impose on other countries either China's views or for that matter the US' views? I think the answer is when we were giving advice to the World Bank, that that's global funding, and for global funding, we should take a global perspective. It's perfectly fine to go

along and get those benefits, but if we're going to invest globally or coordinate globally, we might want to think about how we might allow all of the local gains that are well deserved, but do it in a way that pretty cheaply lowers the environmental damage.

Judith Kelley: What kind of leverage do we have over the process here? Now I'm thinking of President Trump's latest pick to the World Bank has said, "The World Bank should lend less to China. Why are we lending to China? They're lending and investing overseas." Is that an avenue for putting pressure on China to be more concerned about the environmental impact of the belt and road initiative? What levers do we have?

Alexander Pfaff: I think they are financially a lot less than they used to be. The public financial capital used to be a much bigger pool than the private or the other countries. China has plenty of money to invest. I do think that the purely financial lever is smaller than it was. I think we have to hope that as China wishes to be ever more of a leader, and I think that's why you see these statements that you read at the beginning of the program that "This will be green. It will be a green road. We will be a leader", and maybe even the competition for leadership. The US is not currently out front on environmental leadership, having pulled out of say the Paris COP.

Judith Kelley: Sure.

Alexander Pfaff: With enough attention brought to bear as what the consequences are, and with good identification as we're trying to say is possible as kind of cheap alternatives, it could be worthwhile for China to be able to say "We are a leader." There is one vehicle that China has supported that we think has tended to be green in way to show that one could be a leader. I think the concern is more when other financial flows that are not as high profile and probably much bigger are supporting other projects, and they're not getting a lot of attention. There's less reason for China to impose those sort of more leading standards.

Judith Kelley: I see. You have a lot of previous experience with the conflict between infrastructure development and protected forest areas, and you've looked specifically at central and south America. What about the belt and road initiative is different?

Alexander Pfaff: I think first that a large portion of the funding can be not global but focused on people who have a more narrow agenda, second the locations. You asked earlier, "Where are these investments going?" A good example that is yes, in my own earlier work, I looked at roads in Latin America often on frontiers, a little bit more empty when people move in, it increase the pressure on the environment. A PhD student recently [inaudible 00:14:09] who is now at the World Bank he worked on new roads in India, a much more densely populated are, and there in India like Brazil or the US, there's sort of many Indias in India, and many Brazils in Brazil. In India, on average new roads didn't hurt the forest. Especially in the

more densely populated places, new roads can lead people to move to the city, to move out of agriculture, to abandon land and have it regrow. Even there in India in the more remote places with more forest, the roads did hurt the forest.

Alexander Pfaff: Just being informed about what are the conditions we're talking about? Could we possibly target the places that are good for the economy and less damaging for the environment to me opens a lot of possibility, that's why we did this outreach.

Judith Kelley: Are you a pioneer in this area? Are there lots of people are concerned about this? I've not heard so much about this.

Alexander Pfaff: Well there's a lot of people concerned about it, many fewer people doing close studies of the impacts. I think it's very easy to assume that all roads do the same thing. I think it's important that we don't, that's where we get to choose and say, "This road is really damaging, this is not so much." We have to allow that we're not going to block all roads, and we don't want to block all roads. We really want the smart ones.

Judith Kelley: You think there's a way for China to carry out this initiative and still be protective of the environment?

Alexander Pfaff: That's the goal. The goal is to say with just some care and some looking ahead, and putting some pressure so people look ahead, you really can do roads that are economically more smart and environmentally more smart. We can do a lot better.

Judith Kelley: In an ideal world, how would you like to see China handle the environment in the context of the belt and road initiative? What sort of policy approach would you like to see?

Alexander Pfaff: Yeah so I believe that investing in roads is going to matter a lot. I'll just give an example. There's not a single answer as you say for every possible road and country, but it appears to me that from the economic studies and studies that I've been involved in, the benefits of these roads tend to be bigger where you continue existing trade. You don't go out into empty places that have never traded and don't have capacity and infrastructure. Probably there's some pretty big cities there, and those places are already relatively damaged in terms of forest, so you can think of intense [inaudible 00:16:28] between a focus, or connections, or corridors is maybe a better word, intense corridors of economic development without necessarily spreading all over the place, without a lot of gain, but a lot of damage. I think one example is going to be corridors of environmental conservation, and corridors of economic intensity, just as a broad idea that I think applies in quite a few places.

Judith Kelley: That's interesting. From a historical perspective, is what we're seeing China do unprecedented in terms of laying out this big infrastructure plan on a global

scale, and if it's not, if it's a case that Europe or the United States invested in similar infrastructure projects potentially during the colonial period or other times, did they make the same mistakes at that time? Do you know?

Alexander Pfaff: Yeah so I think that's the right fair perspective, including we need to have an agreement done. It shouldn't be a condemnation and often you would hear responses for instance in Latin America the US had the Homestead Act, please go out and cut everything down in order to gain property rights. There are so many stories of improve the land in the name of whomever, could be the king, god. Yeah this has happened for a long time. I think two things, one, we should learn from what happened, and as we are many, many more people and much more dense, it is true that now we maybe should make different choices, but that doesn't mean we should tell the poorest people on the planet they don't get to progress, but rather it could mean we could give support so that the things that let them progress are done in an environmentally smarter way.

Judith Kelley: Excellent. Well thank you very much for joining me today Alex.

Alexander Pfaff: Thanks very much.

Judith Kelley: Alex Pfaff is a professor of economic policy, economics and environment at the Sanford School of Public policy. You would be able to find a link to the article I mentioned about the deforestation risks of the belt and road initiative at our website [policy360.org](http://policy360.org). I'd also like to invite you to tune into Ways and Means, a documentary style podcast also produced here at Sanford. They've just launched their fourth season with a four part series looking at climate change, and the first episode explores intriguing new research on how to turn change climate change skeptics into climate change believers. That's our award-winning Ways and Means podcast hosted by journalist Emily Hanford. You can find it wherever you get your podcasts. Thank you for joining us today, I'm Judith Kelley.